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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,147	02/01/2002	Ulrich Muller	225479US0	9167
22850	7590	08/02/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER LAWRENCE JR, FRANK M	
			ART UNIT	PAPER NUMBER

1724

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/061,147		MULLER ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Frank M. Lawrence		1724	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. *The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.* The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973). This objection refers to the incorporations of foreign patents and non-patent literature on pages 3, 4 and 6.

3. The disclosure is objected to because of the following informalities: The reference to claim 10 in line 16 of page 9 is unclear and should be avoided because the claim numbers and content can be changed with amendments. Applicant is requested to maintain a clear line of patentable distinction between this application and copending application 10/608,146.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-6 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yaghi (5,648,508).

6. Yaghi '508 teaches a crystalline metal-organic microporous material comprising an aromatic polycarboxylic acid bound to a metal ion such as copper in a solvent with a templating agent (col. 4, line 39 to col. 5, line 43, col. 8, lines 41-49, col. 12, lines 57-65, claims 4-8). The material is disclosed as being useful in separation processes in which zeolites have been used, such as in the adsorption of molecules or ions from gases (col. 1, lines 16-33, col. 3, line 60 to col. 4, line 4, col. 17, lines 40-45).

7. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by the European Patent Application (EP 0727608 A2).

8. EP '608 teaches a gas storage system for an automobile, comprising a porous organo-metallic complex formed by mixing a biphenyl dicarboxylic acid with a metal ion such as copper in a solvent, resulting in a frame work having a BET surface area of 50-1000 m<sup>2</sup>/g (p. 3, lines 20-49, p. 4, lines 12-16, p. 10, lines 30-33, p. 11, lines 11-14). The complex is used to reversibly store methane, ethane, propane, butane (known sources of hydrogen), or nitrogen (p. 4, lines 21-24). A device for storing the gas includes a container for holding the complex, an entrance/exit opening for allowing the gas to enter or exit the device, and a gas-tight maintaining mechanism

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capable of maintaining the gas under pressure as part of a fuel cell on board an automobile (figures, abstract, p. 2, lines 30-35).

9. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese reference (JP 09-227572 A).

10. JP '572 teaches a gas storage system for an automobile, comprising a porous organo-metallic complex formed by mixing a bidentate organic ligand, such as 2,3-pyrazine carboxylic acid, with a metal ion such as copper in a solvent, resulting in a framework that can reversibly store methane, a known source of hydrogen. A device for storing the gas includes a container for holding the complex, an entrance/exit opening for allowing the gas to enter or exit the device, and a gas-tight maintaining mechanism capable of maintaining the gas under pressure as part of a fuel cell on board an automobile (abstract, machine translation paragraphs 9, 11, 13-15, 18, 20). It is submitted that the complex will inherently have a specific BET surface area of larger than 20 m<sup>2</sup>/g because it has the same structure and storage uses as those claimed and embodied in the instant invention.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose hydrogen storage systems and adsorption materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence  
Primary Examiner  
Art Unit 1724



7-29-04

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